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A NEW WORLD OF INFORMATION

THE ATARI CONNECTION

MARCH 1982

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GETTING ACQUAINTED

LETTER FROM ROGER BADERTSCHER

President, The Atari Home Computer
Division



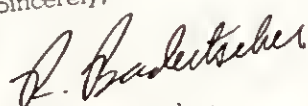
This issue of THE ATARI CONNECTION marks the first anniversary of its publication. The past year has been both exciting and rewarding. We at Atari have experienced unprecedented growth as more and more of you have chosen to bring the computer age into your homes with our computers, programs and accessories.

We're all participating in a truly revolutionary experience. The home computer, linked to expanding telecommunications networks, will bring a world of new possibilities into your home. New ways of learning, working, playing – even shopping – are becoming available. At Atari, innovation is our heritage. In that vein, we're putting every effort into developing new products and new programs to meet your needs today and for the future as well.

THE ATARI CONNECTION keeps you abreast of the home computer revolution here at Atari; in schools, in museums, and in the homes of thousands of ATARI Home Computer owners throughout the world. We want you to share the expertise of our technical people and the experience of other ATARI Home Computer owners like yourself. You'll hear about APX (Atari Program Exchange) for affordable user-written programs. You'll learn about new products from Atari as they become available. It is our aim that THE ATARI CONNECTION strive to intrigue, explain, entertain and simply serve as the single best source of information for your ATARI Home Computer.

Keep reading THE ATARI CONNECTION. I think we'll have some pleasant surprises for you in 1982.

Sincerely,



Roger Badertscher
President, Home Computer Division

LAS VEGAS CONSUMER ELECTRONIC SHOW

By Ted Richards

LAS VEGAS, NEVADA – The Las Vegas Convention Center is one of the largest convention facilities of its kind anywhere in the world. To give you an idea of its size, you could easily play a football game plus a soccer match or two within its huge dimensions – not to mention space left over for a good-size "normal convention." Needless to say, *The Las Vegas Consumer Electronic Show* is the largest exhibition of its kind anywhere in the world.

This past January 6th through the 9th, manufacturers of consumer electronic products from the United States and abroad met for four exhilarating days to parade their latest offerings for the American consumer. Wonderous new products – many featuring space-age technology – were displayed, demonstrated, and introduced for 1982 which promises to be another big year for the fastest growing industry in the nation.

Atari, Inc. represented its popular position in the industry with a friendly, open, two-story booth that featured a lighted rainbow colored canopy. The Atari booth attracted some of the largest crowds with a combination of home video games and ATARI Home Computers. Representatives of the Atari Home Computer Division were kept busy around the clock demonstrating the versatility and convenience of ATARI Home Computers.

Dale Yokum, the Manager of the Atari Program Exchange (APX), entertained some of the largest groups with

GETTING ACQUAINTED

demonstrations of APX's outstanding list of programs written by ATARI Computer owners. The popularity of the APX programs were a tribute and testimony to the imagination, and intelligence of the dedicated people who created and developed these programs for the ATARI Computer.

The Home Information Center station demonstrated to incredulous visitors the vast new world of information available to owners of ATARI Home Computers right now. Visitors were given print-outs of the latest stock quotes from the *Dow Jones News/Retrieval Service*. Mike Ward from CompuServe demonstrated how he keeps in touch with his home office in Columbus, Ohio by simply checking his "electronic mail box." Even San Francisco Forty-Niner and Dallas Cowboy fans kept abreast of all the latest sports stories and predictions for what turned out to be one of the most thrilling NFC Title football games ever!

From the praise and comments heard and discussions held, The Atari Home Computer Division can look forward to another big year of bringing the computer age home.



Las Vegas Consumer Electronic Show
The rainbow-canopied stairway to the Atari Home Computer pavilion.

inter connections

By Earl Rice

One thing ATARI Home Computer users have in common is an interest in applying computer technology to their personal interests. A group of people who have traditionally been at the leading edge of technology are radio amateurs. It's only logical that some of them would be interested in applying computer power to their achievements in communications technology. I had the opportunity to meet such a person recently.

Sheldon Leemon is the secretary for the Michigan Atari Computer Enthusiasts, one of the largest user's groups in the country. Their group is well known for their interest and ability in data communications projects.

Sheldon got into personal computing through his interest in amateur radio. He was looking for a capable computer that wouldn't interfere with his amateur broadcast signals. On the recommendation of an amateur broadcast equipment company, he investigated the ATARI Home Computer which is widely known as an

interference-free computer, thanks to its metal shielded design. He was immediately impressed, and bought one.

Sheldon had no background in computers, but he grabbed the ATARI BASIC manual and started learning to program his ATARI Home Computer. His first program was, naturally enough, a program to teach Morse Code. From that beginning, he went on to write other programs, among them, the ATARI Program Exchange (APX) prize-winning character set editor. INSTEDIT.

Sheldon is interested in forming an amateur radio network of ATARI Home Computer users. If you are interested, you can contact Sheldon by writing to him at the following address:

Sheldon Leemon
c/o Atari User Group Support
60 East Plumeria C
San Jose, CA 95134

While you're at it, you might ask him about a subscription to MACE's very fine newsletter.

Happy Computing!

Earl Rice is the Manager of The Users' Group Support Program, for the Atari Home Computer Division.

Special Additions Catalog Corrections

Please note these corrections for your Atari Special Additions Catalog:

Correction to Company Index

Systems Furniture Company
2727 Maricopa
Torrance, CA 90503
(213) 533-1212

Computeak
Suite 630
7000 Franklin Boulevard
Sacramento, CA 95823
(916) 392-9724

SRW Computer Components
(714) 963-5500

Corvus Systems, Inc.
2029 O'Toole Avenue
San Jose, CA 95131

Missing from Index

Micro Aids
301 Balboa
San Francisco, CA 94118

Libraries Unlimited
P.O. Box 263
Littleton, CO 80160
(303) 770-1220

HOME INFORMATION PIONEERS



By Peter Hirschberg

"For knowledge itself is power..."
Francis Bacon

"Religious Meditations: Of Heresies"

The moment you link your ATARI Home Computer to an information network, you will have at your disposal a revolutionary new electronic communications system. Be prepared for an exciting new experience. You will at once join thousands of other *information explorers* discovering a vast new world of information.

Information which was heretofore available only at the office can now be accessed anywhere there is a telephone. Yet, the prospect of the electronic cottage is at once an advance-

ment and a challenge.

A stockbroker I know recently purchased an ATARI Home Computer and announced he was going to spend the summer as a counselor at his son's camp. He told me, "I've got a telephone and my ATARI Computer. I'm already using the Dow Jones News/Retrieval Service to watch the stock market, so I'll call it from camp instead. I can also call my firm's main computer to exchange messages and keep in touch."

Could a business or corporation manage large numbers of employees working in their homes who only share computer terminals with their managers? Production line techniques of management and the idea of the workplace originated with the invention of the printing press and reached

their pinnacle in the manufacturing and assembly line. Established social traditions may no doubt offer some resistance to the idea of people working in their homes, not to mention workers who may prefer the social contact a workplace provides.

Japan, France and Great Britain are also introducing information networks to the home and encountering changes in the workplace as rapidly as the United States. These countries all have national telecommunications monopolies and introduce new technology as a matter of national policy while in the United States our entrepreneurial market forces have fostered a, "let's see what works" attitude.

The United Kingdom already has two fully operational teletext information systems in use. TELETEX accepts

SPECIAL FEATURE

computer information encoded into an unused portion of a television signal. Subscribers to the BBC's CEEFAX and Independent Television's ORACLE can view hundreds of colorful pages of computer information on topics ranging from news to travel to consumer products. So far, 300,000 Britons have purchased the system.

France startled the computer industry two years ago with the announcement that within ten years every French telephone subscriber would be given an electronic telephone directory terminal, a compact nine inch screen and keyboard that would eliminate the need for phone books and information operators. Furthermore, the French government claimed it would be cheaper to give everyone a computer terminal than to maintain operators and phone books.

One of the world's most advanced home information experiments was conducted in Japan in 1978. The "Highly Interactive Optical Visual Information System" utilized a network of fiber optic cables to link the homes in a small neighborhood. Fiber optics can carry far more information than even cable television. This capability allowed the Japanese to bring two-way television, computer and audio services into selected homes. Residents could view any number of recorded television programs or movies, retrieve information stored on computer or microfiche, and conduct television or computer conferences from their homes.

Gary Arlen, publisher of International Videotext and Teletext News, believes that, "...the U.S. can learn from the experience of the European pioneers. The U.S. system will draw on the best points of the foreign systems, and the resulting product may be more integrated and complete than any of the earlier systems."

When radio was invented, it was immediately put to the same use as the telegraph: ship-to-shore communications. Only after radio had been around for more than a decade did a farsighted RCA employee (who later became Chairman of the Board) suggest there might be a business in selling radio receivers to the public so

they might hear concerts, news, or sports. Radio came into its own when it ceased being a technological curiosity and became an information and entertainment medium. Likewise, computer information services will become most popular when people find the information indispensable.

Computer networks appeal to users now because they permit you to customize and tailor the information according to your own personal desires. No two sessions on an information network are alike. Tonight, the 2000 people who sign on with CompuServe will have 2000 unique experiences.

A computer network also allows you to become a publisher. By sending a message to a common bulletin board, adding one's comments to a file of movie reviews, or participating in a special interest computer conference, you publish for all who use the network.

The availability of a virtually unlimited range of information may require that we learn how to scan and focus on just the information we need, least we become overwhelmed. This phenomenon is similar to the feeling one has when turning on a shortwave radio: a clutter of voices, an overwhelming realization that there are messages and information everywhere along the band, with virtually no place to catch your breath. With the computer, each user must be his own editor.

Information handling skills will be just as important as literacy if our next generation of students is to efficiently utilize the vast amount of information available. I recently heard someone in our computer center summarize this by exclaiming "Right now I'm handling 64K of information, but I've only got a 4K mind!"

What we call the information society actually began in 1955, seven years after the invention of the transistor, the year color television was introduced, and four years before the first Xerox machine made its debut. In that year the U.S. economy underwent a dramatic change: the number of information service workers surpassed the number of Americans employed in manufacturing industries. For the first time, more of us were in the business of creating, transforming and using knowledge than in making things.

Today, more than 70% of all Americans are in information and service industries. And while the need for accountants, consultants, secretaries, teachers, programmers, and writers increases, manufacturing has fallen on hard times. The recent experiences of the steel and automobile industries are dramatic examples.

Yet, the new information technology linked to our home computers has revealed a vast new electronic world full of exciting new ideas - new ways of communicating with each other, new adventures and new challenges to our forever curious human intelligence. By becoming users of advanced telecommunications services, we all become pioneers in this new world of information.

Peter Hirshberg is the Curator of the COMMUNICATIONS exhibit, Capital Children's Museum, Washington, D.C.



SPECIAL FEATURE INFORMATION AT YOUR SERVICE

By Rich Baker

It was love at first byte. Though neither person had ever seen the other, they grew fond of each other by the words they used to communicate. The subtle way he answered her questions, her humorous replies – each sensed something special about the other.

Finally they met, and their fondness for each grew. But they have never forgotten how they first became acquainted even though they were hundreds of miles apart.

The significance of this light-hearted story is not that two people who had never seen each other became close friends, but rather the way in which it all happened. They, and hundreds of other people across the country, met through the use of one of the most unique communications media in the country: a home computer-linked Citizens' Band (CB) Simulator.

Even more important than the story, however, is the revolution in communications which the story proposes: a revolution fueled by the boom in personal computer sales and the

establishment of international information and communications networks.
The Value of Information Networks

The communications capability provided by a network information service puts you in touch with people all across the country through the use of telephone and cable lines. You receive the benefit of long-distance communications without the associated high price tag, since the cost of the network is spread out among thousands of users.

Network communications also allows you to communicate directly with other owners of home computers. The two-way communications offers the immediacy of broadcast communications with the convenience of letters.

Through the use of the many bulletin boards on CompuServe, you can easily exchange ideas and information with people. And many special interest groups exist for the purpose of sharing information among people with the same interests, be it aviation or the

Finance

Quik Quote features high, low, closing, volume and net change figures on more than 9,000 securities, updated throughout each trading day. Standard & Poor's General Information File offers detailed descriptive and financial information on 3,000 major publicly-held companies. Value Line Database II has more than 400 items of information on major industries, transportation, utilities, banking and insurance companies.

Also personal financial programs for home mortgage calculations and depreciation analysis, an assets/liabilities program and the financial pages of more than a dozen major newspapers.

Electronic Communications

- ☐ EMAIL (Electronic Mail) – your message storage and retrieval system.
- ☐ Bulletin Boards – List items for sale or wanted, and swap information with people throughout the country.
- ☐ Citizens Band Simulator – Use your own "handle" and talk to hundreds of people across the country.

Electronic News

Read daily electronic editions of the nation's most prominent newspapers including *The New York Times*, *The Los Angeles Times* and *The Washington Post*. Also continuously updated news from *The Associated Press*.

Entertainment

Computer games, movie book and theater reviews, sports standings and predictions, trivia, quizzes and much more.

Home and Family

Get valuable information on personal health and physical fitness, food recipes, nutrition, home repairs and remodeling, and energy management for home and office.



CompuServe Page 25
Welcome to EMAIL, the user-to-user message system from CompuServe. EMAIL allows you to communicate with other users of the information service. Instructions and options are included on each page. You are prepared for all required information. If you are not sure of what to do, say a line help and receive further instructions.

Key CTRL-@ for next page

use of ATARI Computers.

Information services also have the facilities to keep large amounts of information up-to-date for your use. For example, CompuServe can electronically transfer you to computers in different parts of the country, allowing you to access an even wider variety of information sources.

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Get Connected to the Incredible World of ATARI Home Computers!

A world of exciting New Products and Programs for the Home, Family, and Business. You'll learn about creative new uses for your ATARI Computer. We've got Special Program Puzzles, Games and Contests for Kids-Even Computer Comics!

With your subscription to THE ATARI CONNECTION you'll get 32 pages of the best in color graphics, illustration, photography and cartoons. Plus three catalogs! Our newest edition of the ATARI Computer Product Catalog and two *ATARI Special Additions™* - our exciting new catalog of useful programs and products created by a variety of independent manufacturers especially for your ATARI Home Computer.

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How to Use CompuServe

To help you find the information you want, most major information services provide you with a menu of choices. No special knowledge of computers is necessary. You're guided step-by-step through a "tree" structure to the information you desire.

For the more experienced users of CompuServe, the use of "GO" commands will take you directly to any electronic page of information, allowing you to bypass many of the menu pages.

Just a Phone Call Away

The CompuServe Information Service is available through a local telephone call in more than 300 U.S. cities and in Canada.

You'll find using an information service such as CompuServe to be a truly revolutionary new experience. The convenience of having such a large amount of news and information literally "at your fingertips" can change your view of the world and make your life more rewarding and productive.

Rich Baker is the Editor of CompuServe Information Service's Today magazine.

GETTING STARTED WITH AN INFORMATION SERVICE

The Communicator kit links your ATARI Computer to powerful computer networks and to other ATARI Computers near and far. You'll find everything you'll need to join the information revolution right in the kit: a TeleLink I cartridge, an ATARI 830 Acoustic Modem and an ATARI 850 Interface Module, information directories and an operating manual. Plug in the Acoustic Modem, dial a local phone number, and your machine is no longer just a "home computer," but an interactive terminal proficient in many computer languages and capable of accessing immense data files.

Powerful services are available for users of the Communicator kit which allow the ATARI 400 or ATARI 800 Home Computer to tap into this vast worldwide bank of computers.

Not only is the cost of these services small (usually about \$5 per hour in the evenings), but the variety of application and the computing "clout" offered is tremendous!

When you buy the Communicator kit you automatically receive one hour of free time on each of the three services so you can experiment:

CompuServe Information Service - For home or office - electronic mail, bulletin board, programming languages, stock quotes and more.

THE SOURCE AMERICA'S INFORMATION UTILITY - A national information network for professionals and consumers, electronic shopping, career information, electronic mail and more.

Dow Jones News/Retrieval Service - Puts Wall Street at your fingertips. Stock quotes, news and articles from *The Wall Street Journal*.



SPECIAL FEATURE

CAPITAL CHILDREN'S MUSEUM COMMUNICATION EXHIBIT

The Capital Children's Museum, located in Washington, D.C., opened a major new exhibit this past November, 1981, titled "COMMUNICATION".



The new exhibit covers 10,000 square feet and features ten playful and educational exhibits that invite children and adults alike to spend an afternoon wandering

through mankind's history of communicating with each other.

Ann Lewin, the Museum's director and founder, began five years ago to create a learning environment where children would experience a new idea or lesson. Her personal philosophy is based upon the Chinese proverb:

*I hear and I forget
I see and I remember
I do and I understand*

All of the Museum's exhibits are filled with things to hear, see, move, light up, ask questions, play games, smell, taste and experience.

In the COMMUNICATION exhibit you can listen to pig-Latin, send messages by a torch using a system that dates back to 300 A.D., print a page on an 18th century printing press and even get a close look at a modern communications satellite.

THE CAVE takes us back to the Ice Age with a light and sound show that introduces the themes of the exhibit.

Here in an Ice Age cave of 30,000 years ago, we experience the dramatic, story-telling environment where primitive rituals may have been performed to pass along information vital for the survival of our early human ancestors.

Seven major exhibits introduce visitors to the exciting new world of computers and modern information technology.

HOW WE COMMUNICATE features four major exhibit areas which demonstrate the different ways we send information and how to solve the problems of communicating across time and distance. Pictures, words, computer games, sound tapes, and hands-on activities teach children that *all* communication depends on human recognition of a pattern.

Visitors communicate with Greek torch, African drum, hieroglyphs, pictograms, ship's blinker, alphabet, Morse code and Braille.

THE HALL OF INFORMATION contains many of today's information



machines which are used to demonstrate a future society of electronic newspapers, libraries, and personal communication systems. Other exhibits in this Hall show the

many diverse ways in which information has been stored - in paintings, on hide, in computer code, and even on knotted string. An exhibit on micro-storage shows how modern techniques for compressing information can store the entire *Bible* within a square inch!



MASS COMMUNICATION. This exhibit has visitors walk through a colorful facade of the last nickelodeon in Washington, D.C. Here, you can learn about the major elements of mass media: print, photography, and film and how they have made us more aware of people in different parts of the world, affected our use of leisure time, aroused emotions, and changed our perception of the world at large.

TELECOMMUNICATION. Electronics revolutionized communications not to mention our lives, our society and the modern world we live in. The radio, television, and computer exhibits are ringed together around a large model of a communications satellite. This striking exhibit design illustrates how the various communications technologies are merging and becoming more dependent upon each other.

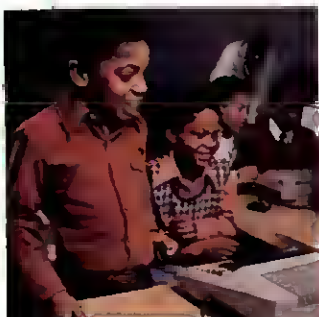
SATELLITE programs from the Museum's five-meter earth station are on view here. Computer programs let visitors launch and track a simulated satellite and see what information is up there in the sky. The exhibit raises questions about who owns information and describes humanitarian services available because of satellites.

COMPUTERS, according to Dr. Alan Kay, Vice President and Senior Research Fellow of the Atari Advanced Research Division, believes computers will be the paper of the future, their keyboards will be the pencil. At the entrance to the **COMPUTER** Hall, visitors will pass a display featuring an actual component



from *Whirlwind*, a vintage MIT computer of the late 1950's. The artifact on display is a *register bit size*, a six foot tall array of vacuum tubes and wires which stored a portion of a word.

Whirlwind occupied an entire floor of MIT's Lincoln Laboratory and was the first computer to use core storage. Next to the Whirlwind segment sits a small television monitor which presents Edward R. Murrow interviewing MIT's Jay Forrester who demonstrates three programs on the

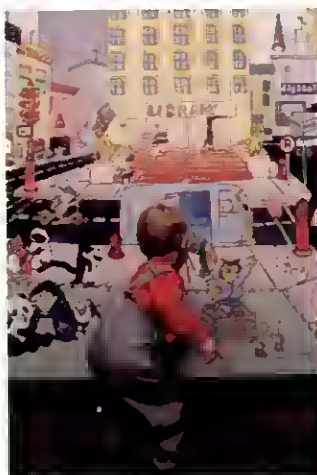


computer. To show how advanced today's home computers have become, an ATARI 400 Home Computer recreates all the

demonstrations performed on the Whirlwind - only the ATARI 400 operates with greater speed, more color and sound.

FUTURE CENTER contains twenty ATARI 800 Home Computer systems donated by Atari, Inc. Here, children and adults become familiar with home computers through special classes and activities. A special weekend workshop, CompuPLAY provides an hour of supervised exploration on the ATARI 800 Computers. The unstructured session introduces students to the incredible world of small computers through games, computer graphics and music.

The COMMUNICATION exhibit uses ATARI Computers throughout special exhibits to create learning games, graphic displays and to control light and sound displays. As a result, the Museum Software Staff, headed by



lack of pre-written software available for the Museum's educational exhibits.

Peter Hirshberg, the Curator of the COMMUNICATION exhibit, and fellow Software Staff member says, "We spend a lot of time in the hallways, looking through windows at people playing games. We watch what they're doing, where they get frustrated. Then we improve the programs."

"We use the twenty-second rule here," continues Peter. "If people can't figure out the game or exhibit within twenty seconds, the exhibit program will be a failure."

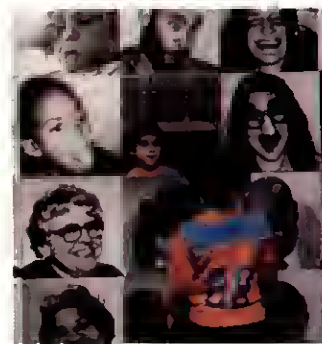
This philosophy on the part of the Software Staff has been responsible for their creating some of the most innovative, entertaining, and effective educational software available for microcomputers.

Another example of the Museum staff's creative and innovative approach to introducing children to modern technology is the KIDNET communication system. KIDNET was developed as part of the Museum's time-sharing system which features twenty-four highly visible keyboard terminals placed throughout the exhibits.

Children are

Eric Podietz writes numerous computer software programs for the ATARI Computers since there's a

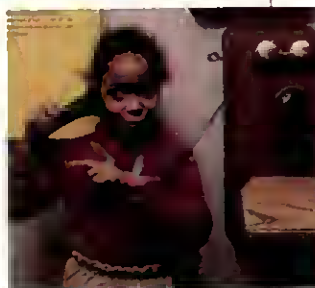
encouraged to provide answers about themselves - name, address, birthday, interests, and school. After answering the questions, visitors learn how they compare to others who have been at the Museum. For example, "I am the 200th Harold, but one of only four from the state of Illinois," or "15% or 23,000 Museum visitors this year are the same age as I am."



The combination of well-designed, entertaining exhibits and state-of-the-art microcomputer technology makes the Capital Children's Museum one of the most popular new show places in the nation's capital. For further information you can write:

The Capitol Children's Museum
800 Third Street
Washington, D.C. 20002

The Capital Children's Museum and Ted Richards, Editor, THE ATARI CONNECTION



NEW PRODUCTS

MY FIRST ALPHABET

A NEW COMPUTER GAME
FOR PRE-SCHOOLERS

By Ann Kelcy

"You're crazy!" Fernando Herrera's friends told him two years ago. "Why buy a home computer when you can buy a good stereo for the same amount of money?" they asked.

But Fernando knew what he was doing. Within six months, the novice home computer programmer from Elmhurst, New York, had written and sold his first computer program for more than he paid for his entire ATARI 800 Home Computer system. This past January, Fernando's MY FIRST ALPHABET won the \$25,000 Atari Star Award in the ATARI Software Acquisition Program's contest for user-written software contributed to the ATARI Program Exchange!

Within the past two years, Fernando has devoted an extraordinary amount of time and effort to learning about the capabilities of his ATARI Computer. His efforts have changed his life in many ways.

The change began when Fernando decided to apply his growing knowledge of ATARI BASIC to writing a program to test the vision of his two-year-old son, Steve. Steve was born with severe cataracts in both eyes. Fernando became concerned that Steve's "growing up in a world he couldn't see" would slow his intellectual development.

After Steve underwent a series of

operations, Fernando suspected Steve could see more than the doctor believed he could without using special lenses. During this same period, Fernando decided he wanted a home computer (despite his friend's advice to the contrary) and spent six months evaluating various microcomputers.

Being an architect by training, he found the ATARI Computer's graphics and color range especially appealing. Soon after purchasing his ATARI Home Computer, he concluded it was "the perfect tool" to test Steve's vision.

He wrote a program that displayed the letter "E" in different sizes in the TV screen. The program confirmed his suspicion about Steve's vision, and his physician was indeed surprised at



Steve's ability to see small "E's" without special lenses.

But something else was occurring because of Fernando's letter program. Young Steve was so attracted to his father's computer that he played for hours just with the "E". Fernando then added a picture of an elephant next to the "E" for his son's amusement.

Gradually Fernando added more letters, one at a time—first an A, then a B, then an O. While still designing his program, Fernando participated in a seminar organized by the Atari Home Computer Division for software developers. The seminar was a "critical point in learning what ATARI Computers could do," he claims.

Fernando's letter program was now becoming polished enough that he started toying with the idea of trying to sell it. He completed designing pictures for each letter of the alphabet, and a number of other features, and then started marketing his program.

Late last year, the program, called MY FIRST ALPHABET, came to the attention of the ATARI Program Exchange. It was so graphically appealing, well-designed, and well-suited for preschool users that it captured not only first place in the Education category in the winter judging of APX's quarterly contest, but also the new annual \$25,000 ATARI Star Award.

Fernando's friends have changed their opinion over the last two years. They watch four-year-old Steve turn on the computer and disk drive, load his favorite programs, use the keyboard and Joystick Controller, and type just about any printed word. They see Steve working with letters and numbers on the computer—performing activities their older children haven't yet mastered—and they too want their children to become as comfortable and proficient with computers. The critical factors, Fernando believes, are early exposure to computers and programs so interesting and entertaining that children don't even know they're learning: they just know they're having fun.

Fernando stresses that a lack of formal computer programming training shouldn't discourage new programmers. More important than schooling,

Fernando believes, is the willingness to "go an extra inch," to put the extra effort into refining a program.

Fernando also stresses the importance of preplanning. As a novice programmer, he usually wrote a program to fill an immediate need and often wrote code and developed features on the fly.

Now, however, Fernando is more organized in his approach to writing programs. He devotes a lot of thought before writing a single line of code. For example, he determines the graphics mode most appropriate for the character set he wants to use, and he carefully sketches all screen displays on paper. Then, after creating a flowchart of his program's logic, he finally begins writing the code for the program.

Fernando believes a primary reason people buy home computers is for the educational opportunities computers offer, and he has definite ideas on what makes one educational program stand out over others. Outstanding programs take advantage of the unique qualities of computers, such as their infinite patience, their capacity for holding information, and their ability to use motion, color, and sound. Parents and teachers might not always have time to help, Fernando observes, but a computer does.

MY FIRST ALPHABET

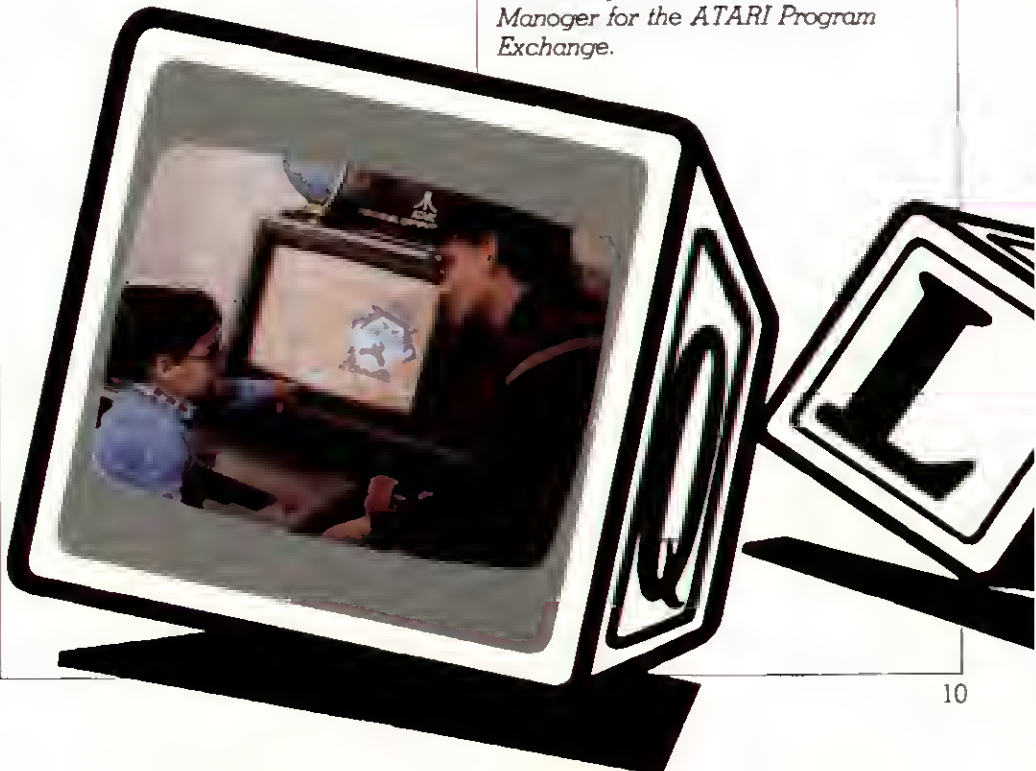
The design of MY FIRST ALPHABET appeals to preschool children through motion, color, graphics, and sounds. Children watch each letter's picture form on the TV screen. To keep very young children amused, a little man runs across the screen as the picture unfolds. Familiar tunes bring each picture and response to life.

Another important point to keep in mind, says Fernando, is to "think with the mind of the child...to wear their shoes" when designing a program. For example, MY FIRST ALPHABET contains several possible activities, organized as menu selections. But to help preschoolers unable to read, Fernando also created little creatures for each selection.

Fernando remains determined to learn even more about ATARI Home Computers and to apply his knowledge to improving his program designs. Only now his family complains less about his perserverance; they've seen the results!

(My First Alphabet will require an ATARI 800 Home Computer, a minimum of 32K RAM, and an ATARI 810 Disk Drive. Package will include a program diskette and a reference guide. Estimated availability: Summer quarter, 1982.)

Ann Kelcy is the Publications Manager for the ATARI Program Exchange.



NEW PRODUCTS

SPECIAL PROMOTIONS

APEX PROGRAMS AT YOUR ATARI COMPUTER RETAILER

Many of the ATARI Program Exchange (APX) programs are now available at your ATARI Home Computer retailer. Now you have two ways you can buy selections of excellent new programs written by ATARI Home Computer owners – the APX Mail Order Catalog sent to you quarterly and at your local ATARI Computer retailer.

Thirty-eight titles have been made available to stores. Many more exciting new titles are also available through the APX Catalog. Check with your local ATARI Computer retailer to see which APX programs they have in stock.

This new software offering is just one more way that we're trying to make it easier for you to expand the benefits of your ATARI Home Computer.

WATCH FOR SPECIAL OFFERS ON SELECTED ATARI COMPUTER SOFTWARE

We value our customers! To show our appreciation, we've sent five special coupon offers to current ATARI Home Computer owners who have sent in their computer *Warranty Cards*. The coupons offer up to \$65 in savings on selected ATARI Computer software packages!

So why wait? Now's the time to purchase the software you need to turn your computer into a complete home information appliance!

Check with your local ATARI Computer retailer for the special offers and discounts!

CAVERNS OF MARS

Space game fans looking for bigger challenges will find them in the new computer game **CAVERNS OF MARS**. In this action packed sci-fi scenario, the surface of Mars is barren and rubble strewn – but beneath it lies a challenge only the brave and skillful dare undertake. The Martians have hidden their stronghold deep within the Red Planet, and protected it with an increasingly dangerous set of defenses.

Using your Joystick, you'll have to thread your way through gaping rock formations, out maneuver and destroy enemy ships, dodge mines floating in thin air, sneak by deadly laser defenses, and blow up the alien's fuel dumps. Your ultimate goal – reach their headquarters, plant a bomb, then flee the Cavern before the blast. It's a race with time and a battle of wits!

CAVERNS OF MARS makes excellent use of the ATARI Home Computer's graphic capabilities. It combines fine scrolling with outstanding player/missile graphics and superb color to produce a fast-paced action game.

But the exciting use of the ATARI Computer's full capabilities is not all that makes **CAVERNS OF MARS** exceptional. Behind this remarkable game is a remarkable 17-year old, Greg Christensen. Greg, who's been tinkering with electronics since he was eight-years old, wrote **CAVERNS OF MARS** on his ATARI Computer in just six weeks. **CAVERNS OF MARS** was selected as an ATARI Program Exchange Star award winner last fall. Now, the program has generated so much excitement that we've decided to offer it as an ATARI Home Computer entertainment product! (Program Diskette, requires a Joystick Controller and a minimum of 16K RAM. Suggested Retail Price – \$39.95. Estimated Availability: April, 1982.)



AWARDS

THE FIRST ANNUAL ATARI STAR AWARDS

By Ann Gechman

Saturday, January 16, 1982, The Atari Software Acquisition Program (ASAP) held its first annual Star Award ceremony at San Francisco's Ghiradelli Square. The Star Award and \$25,000 grand prize went to Fernando Herrera of Elmhurst, New York for his program MY FIRST ALPHABET.

The Marcuses, a couple from Freehold, New Jersey, won an Award of Merit for three of the several programs they have submitted since the beginning of the ASAP program.

Sheldon Leemon of Oak Park, Michigan, received an Award of Merit for his INSTEDIT program, which helps the user to generate character sets within BASIC and assembly language programs.

And last, but not least, Greg Christensen's Award of Merit was in recognition of his CAVERNS OF MARS computer game.

Both the Atari Software Acquisition Program and the ATARI Program Exchange (APX) were established to encourage ATARI Home Computer enthusiasts to develop software in the areas of Personal Interest, Education, Business/Professional and System Utilities.

The ASAP program presents twelve quarterly awards, worth up to \$3,000, in addition to the \$25,000 annual Star Award.

Submittals to the APX program remain the property of their authors, but Atari, Inc. pays a royalty for each sale made through the catalog. MY FIRST ALPHABET is an educational computer program for pre-school and early elementary level children. This entertaining new program began as an experiment to determine the amount of eyesight Fernando

Herrera's visually handicapped two-year old son possessed.

Besides receiving the Star Award, MY FIRST ALPHABET has become an impressive new addition to the Atari Home Computer Division's Entertainment software products for the home and school.



Fernando Herrera

Ronald and Lynn Marcuse submitted the award winning DATA MANAGEMENT SYSTEM, WEEKLY PLANNER, and the DISKETTE LIBRARIAN programs. The DATA MANAGEMENT SYSTEM won first prize in the Business and Professional category of the Fall, 1981 contest, the WEEKLY PLANNER won second prize in the Business and Professional category during our Winter contest, and the DISKETTE LIBRARIAN won second prize in the System Software category in the Fall contest.

INSTEDIT was submitted by Sheldon Leemon, an attorney in Oak Park,

Michigan. Sheldon's program can create custom designed character sets that can be incorporated into ATARI BASIC and assembly language programs. INSTEDIT was only the second program created by Sheldon. According to Mrs. Leeman, during the development time of this program, she found herself a "computer widow." Therefore, while Sheldon was presented with an Atari Star Award, we want to award Mrs. Leeman with a Badge of Courage for preserving her sanity during those trying months.

The last Star Award was given to Greg Christensen for his computer game CAVERNS OF MARS. Greg, a 17-year old from Anaheim, California, is currently a freshman at Fullerton College. Greg is obviously a very determined young man, having bought his ATARI Home Computer from his own funds, and taught himself programming. In six weeks, he turned out CAVERNS OF MARS—a fast action, multi-level game so outstanding, that we will soon be offering it as an ATARI Home Computer entertainment product. What an accomplishment for a first-time serious programming effort! Congratulations!

It's because of all the ATARI Computer enthusiasts out there that we offer programs such as APX and ASAP. We are excited by the response you have shown and eagerly await your creative programming efforts!

For more information about APX and ASAP, write to:

Atari Program Exchange
P.O. Box 427
Moffit Park Drive B-1
Sunnyvale, CA 94086

Or you can call our toll-free number 800/538-1862 or 800/672-1850 if within California.

Ann Gechman is a Marketing Specialist in the Atari Home Computer Division.

EDUCATION

COMPUTERS FOR TEACHING THE HANDICAPPED

By Susan Thielen and Ann Gechman

Susan Thielen is a speech and language therapy consultant in Keene, New Hampshire, for a program designed to rehabilitate adults with physical, mental, and emotional handicaps. After thorough research, she chose the ATARI 800 Home Computer System for her work because of its color graphics capabilities and general versatility such as the Joystick Controllers and ease of operation.

As an example, the ATARI Computer's graphics mixed with text provide unique possibilities for teaching people with hearing impairments. The combined exposure to sign language and text at the same time, gives those with a hearing handicap many more opportunities to experience language without the need for sign language interpreters.

Susan's current project is to develop a tutorial language program for a young man, whom we shall call Brian. Brian has a severe articulation problem, moderate hearing impairment and has progressed about as far as his physical limitations and traditional teaching techniques will allow him. Brian's language and physical skills are limited due to both receptive and expressive language handicaps. He is able to use the ATARI Computer keyboard and Joystick (provided the Joystick is mounted on a stationery surface).

At the start of a session, Susan explains to Brian what he is going to do that day. To reinforce what she is explaining, she has Brian practice the lesson without using the computer. When Brian understands each concept, he is then placed at the ATARI 800 Computer and begins the exciting part of the therapy. In each case, when a correct response is given, an entertaining visual display occurs. If a wrong answer is given, a

different flashing visual illustration is displayed.

Brian's handicap prevents him from being able to recognize certain letters of the alphabet, especially when they appear at the beginning of a word. For instance, the letter *T* presents a problem; therefore, Brian is asked to identify the *T* in the word "trip." After this procedure is repeated a few times, Susan then goes to the next stage of the program, where Brian is given a list of four words and asked to select and type the word which contains a specific letter.

Because this is a new therapy program developed by Susan, she is still working on many new concepts and methods. As Susan expressed, "Most people with a speech and/or language handicap have trouble applying what they are learning to practical applications. In other words, if they learn to recognize the letter *T*, they need to understand that *T* occurs in many more words than the ones they already know."

The ATARI Computer opened a new world of excitement and reward for Brian. He has been able to broaden his vocabulary and communicate with others. This is the first time in years he communicated successfully with people. His former situation was one of constant frustration, losing previously acquired skills due to his deteriorating speech and hearing. Through Susan's prescribed therapy program, this young man is able to continue one of his hobbies — music — using the ATARI Music Composer and amplifying the sound. "It is exciting and rewarding to see

such enthusiasm and determination once again in a person who thought his future was a closed door."

Susan also indicated that there are many considerations to keep in mind when programming for people with multiple handicaps. Programs that use a variety of colors and graphics, especially the larger characters and letters, will help those with short attention spans and limited vision. Programs should be specific and uncomplicated to avoid confusion or distraction, and should have adequate time delays built in to allow sufficient response time. Cues should also be both visual and auditory so the program will have the widest application to all handicapped people.

One last important note is that the instructional literature must be exceptional. It is important the author con-

sider the special nature of the user, clearly explaining all procedures for using the program. The instructional material also helps the instructor, who may not have any experience with computers.

Microcomputers such as the ATARI 800 Computer, are

opening new possibilities for therapists like Susan Thielen. Susan is only beginning in her exploration of computerized therapy programs and is encouraged by these first efforts. Anyone who is interested in finding out more about Susan's work, or wants to share their work in this area with Susan and others, please write to the address below and we will put you in touch with each other.

Susan Thielen
c/o THE ATARI CONNECTION



EDUCATION

COMPUTERS ON WHEELS

ATARI IEC MOBILE COMPUTER VAN PROJECT

By Teddi Converse

A blue-eyed fourth grader clad in jeans, running shoes and a "Raiders" T-shirt peered into the media center of Henderson Elementary School. Inside there were thirty children learning how to talk to computers.

"What do you do when it says ERROR?"

"Wow! What's this thing over here?"

"You type yes and push RETURN dummy, it's easy."

"How do you get the paper out of this thing?"

"What's the capital of Vermont?"

"Look! It's printing my name all over the TV!"

bringing the computer systems to the students and schools, the project implements one of the fundamental goals of the IEC, which is to provide programs and experiences to young people that will help their transition from the classroom into the job market.

"The majority of newly hired employees in the working world must be familiar with computers," explained Ernie Hickson,

take home. The packet contains a booklet with a paper keyboard, the same size of the keyboard on the ATARI 800 Home Computer, reading materials that explain some of the vocabulary used in working with computers, and a few elementary programming exercises. The teacher of the class also receives a tape to play for the class which



Amidst giggles, confusion and bright-eyed anticipation these kids were being introduced to the ATARI 800 Home Computer System by the Atari IEC Mobile Computer Van Project, Co-sponsored by Atari, Inc. and the Santa Clara Regional Office of the Industrial Education Council (IEC). The Mobile Computer Van carries fifteen ATARI 800 Home Computer Systems on portable "palates" to various educational institutions in Santa Clara. By

the director of the Atari Van project. "The program is designed by educators and employers because it works toward the project's major goal which is *computer literacy*."

Before the Atari Van comes to the schools, classes receive a packet of pre-session materials for the student to

discusses the history of computers.

By handing out these pre-session materials, the children and their parents can understand what will actually happen when the computers arrive. This approach makes the time spent in the classroom even more productive.

According to Ernie Hickson, the Atari Van program has received an overwhelmingly positive response from parents and citizens in the community. In fact, one teacher sent inquiries home to the parents to see if they would have any interest in their children receiving the program. The teacher only requested a yes or no response, but much to her surprise, a

EDUCATION

large majority of the children returned with checks from their parents for the class.

The IEC Mobile Van project charges a fee of \$60 per hour of instruction or less, depending upon how many hours of instruction are scheduled at one site. Most educators and parents believe the cost is minimal. If you want to learn how to use computers, you usually must go where they are located. With this program, the computers come to you.

On this particular day, the second half of a two-part "Computer Awareness" course was being experienced by 30 children in each session, all in the third through sixth grades. Ann Branch, the teacher of the computer awareness course, explained how the course is set up.

"Each class is spread out over two days, with the class lasting one hour each day. The first half of the first hour is spent letting the children play with the keyboard. Most have seen a typewriter at home or on the school secretary's desk, but never really used one before, so they have a chance to find the letters that spell their names and things like that. We also introduce them to the cursor control keys and the Atari key. (This key highlights letters when pressed.)

"The second half of the first day is spent doing math problems with the

computer and finally they play a "Mad Lib" game, where they answer questions asked by the computer. The special computer program then uses the answers to fill in missing parts of a preprogrammed story. The game is fun because the children get to read the story they helped write on the TV

made it happen and the computer just doesn't make a design or play a game all by itself."

During the second day of the computer awareness class, the children review some of the concepts they learn-



screen, and it has their names in the title of the story."

Ann Branch is extremely effective in presenting complex concepts concerning computers to the children.

"We want the kids to see that computers are not magic, that there are steps one must go through to get the computer to do something for you. They need to understand that *they*

ed on the first day. Then they create a simple BASIC program that commands the computer to print their names all over the screen. They also get to take home a sample of their work. The computer prints out their program on the ATARI 820 40-column Printer.

"The program you just did is called a 'loop' in computer vocabulary," Ann explains to the class. "The computer finds out what you would like it to do by reading the line numbers. On the

first line you told it to print your name by using the

three times on a computerized bill), the kids are highly motivated and can hardly wait for instructions before they get their hands on them.

There are also "In-Service" programs provided for the teachers, parents and principals of

parts of their curriculum when the computers leave."

Ann had just designed a cross-word puzzle to leave with the teacher after the class that used many of the concepts and computer terms.

The Atari IEC Mobile Computer Van's schedule is already rapidly fill-

ing up for this spring and next fall. If your school or organization would like to have the van come to you, scheduling can be made through the Industrial Education Council office. They will provide you with complete cost and scheduling information. The Atari IEC Mobile Computer Van is an excellent example of the innovative educational uses of ATARI Home Computers. The program has proven to be very effective and enjoys widespread demand.

But more importantly, the children are thrilled to get their hands on a

computer and extremely eager to learn everything about it.

As one young student expressed about the computers when the van came to his school, "They were very exciting. It would be nice to have one in my house. At first when I went in there I was shaking a little, but after I got through with them, I wished I had one."

Teddi Converse is a Marketing Publications Assistant for the Atari Home Computer Division.



command PRINT, then quotation marks. Then on the next line you told the computer to go back to the first line and do it again. It's kind of like a dog chasing its tail. It goes around and around and around. Except a dog may get tired and stop, or see a cat run by and go off to chase it, but a computer never gets tired so it will keep going forever and ever until you tell it to stop or the electricity goes off."

The children soak up everything that Ann tells them about how the computer works. Unlike some adults who may have had bad experiences with computers, (the bank made a mistake on their account, or they were charged

the schools that the Atari IEC Mobile Computer Van visits.

"The teachers love to play States and Capitals" Ann laughs. "The In-Service programs are really helpful to them also. Not only do they get the same type of computer awareness the children do, but they also see how they can incorporate what the children learned during the classes into other

EDUCATION

KID'S LETTERS FROM NEW YORK

By Sharon Fitzpatrick

ATARI Home Computers now provide schools and education with a powerful new tool for preparing our children for the technological world they will face in the future. Thousands of children already identify the name Atari with fun, games and family entertainment. This past year, I had the opportunity to witness this fact first hand when Atari, Inc. donated an ATARI 800 Home Computer to a special class of gifted children.

The class, taught by Ms. Dolores Ferragamo, eagerly awaited my arrival at their school, P.S. 36, in Staten

Island, N.Y. My assignment was to help introduce the children to their new ATARI Computer and show them how much fun learning about computers can be.

First, I explained to them what we meant by "computer" and what a ROM (Read Only Memory) and RAM (Random Access Memory) were by using simple comparisons. For instance, I explained ROM was the "house-keeper" for the computer...it helps the computer to accept the basic commands we input and translates them into "words" the computer can understand to operate efficiently and smoothly.

They all caught on quickly. Future musicians like Stephanie, Shari and Jason loved The ATARI Music Composer and the resident artists, Adam

and Jason, were already hard at work dreaming up graphic designs they would create with their ATARI 800 Computer.

I also taught each child how to type a two-line program into the computer that displayed their name on the T.V. screen. The expressions of joy and excitement on their faces when they saw their name was worth a thousand words!

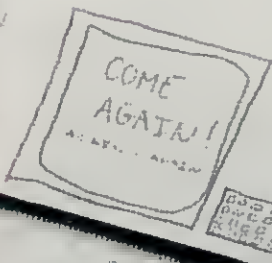
Working with these children was especially gratifying for me. Each one wrote me a hand-written thank-you expressing how friendly their new ATARI 800 Home Computer is and how much they enjoyed my visit.

Sharon Fitzpatrick is a Sales and Marketing Coordinator for the Eastern Sales Region of the Atari Home Computer Division.

Dear Miss Sharon Fitzpatrick,
March 26, 1981

I really enjoyed your visit and how you told us more about the Atari Computer. I enjoyed learning more about the computer too. I also thank you for the lending. I'm sure it will come to good use.

Sincerely!



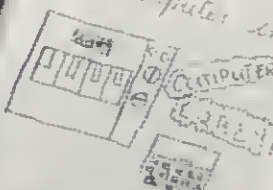
March 27, 1981

back and then a

very much for

March 26, 1981

Thank you very much for the computer in my class. I hope to use it and play some games. I want to also say thank you for the computer. I'm sure it will come to good use.



Thank computer use

Dear Miss Sharon Fitzpatrick,
March 27,

I thank you for telling how to use the computer many things about.

LET down the
at 12:45
March 27, 1981

Dear Miss Sharon Fitzpatrick,
March 27, 1981

ATARI DONATES A COMPUTER CHRISTMAS TREE TO SAN FRANCISCO

By Janet Lecuyer

Atari Inc. helped the city of San Francisco celebrate Christmas 1981 by donating a very special Christmas tree. The tree was the concept of interior designer and color consultant Antonio F. Torrice. Engineers and designers with Atari's Advanced Products Group worked with Tony to create a computer program to control the tree's brilliant decoration of rainbow colored bands of lights.

The beautifully decorated tree was presented to Mayor Diane Feinstein on December 17, during a presentation that combined a display of colored lights, sound and computer graphics.

The Christmas tree lights were arranged in a vertical rainbow of colors, six rows of red, orange, yellow, green, blue and violet colored lights encircled the tree. At the bottom of the tree were six control stations—one for each color. The control stations contained a display screen monitor and a large colored push-button which was connected to an ATARI 800 Computer. People were encouraged to chose their favorite color by using the control station to light up a row of colored lights on the tree.

A "PUSH AND HOLD" message on each station's display screen invited people to step up to the station of their choice and press the button. When they pushed the button, a Christmas tree appeared on the screen, their favorite color lit the tree, and the person was serenaded by computer-generated Christmas carols. As a finishing touch, a true ATARI Computer game-style spaceship circled the tree on the screen.

Most Popular Color

Tony Torrice used the Christmas tree to study people interacting with color. Each station not only controlled the lighting of the tree but also kept track of the number of people that selected the station's color. The most popular color? The final count revealed that violet was the most popular.

Interestingly enough, Tony had predicted violet would win. He explains that violet is the most cerebral color of the spectrum and is the color people are most receptive to when learning and experiencing new situations.

And a new experience it was! The ATARI Christmas tree was truly a creative and unique celebration of Christmas and a wonderful experience for all who saw it!

Janet Lecuyer is the Sales Promotion and Planning Manager for the Atari Home Computer Division.



ENTERTAINMENT

ATARI BASIC GRAPHICS DESIGN

By Jim Dunion

Have you ever wondered how to design computer graphic art? No doubt you have seen computer graphics – television commercials, computer games, science and computer magazines all feature this new graphic medium – not to mention your own first-hand experience with the powerful graphics system built into your ATARI Computer.

"But how do I create and design my own computer graphic art?", you may ask. Your ATARI Computer provides you with the system to create the color, the circles, squares, triangles and lines. You can then use these shapes to learn the basic rules of *graphic design*. Computer graphics may appear to be the ultimate in *high tech art*, but don't be intimidated.

Computer graphics depend upon the same basic rules of design as any other graphic art form. We can't teach you how to become a professional designer, but we can show you how to use your ATARI Computer as a creative design tool – plus have some fun designing and producing your own computer graphics!

The Basic Rectangle

In this article, we'll learn how to build an elementary shape generator for our first primitive shape – the rectangle. For right now, we will work in ATARI BASIC Graphics Mode 7+16 which creates a screen 160 pixels wide by 96 high. The "+16" eliminates a 16 pixel high color band across the bottom of the screen generated by Graphics Mode 7 – hence "7+16".

Also in this mode, we have four colors to work with. To create a rectangle on your computer screen we can assign five numbers (known as parameters) which represent:

- ☐ The color.
- ☐ The horizontal position of the upper left hand corner.
- ☐ The vertical position of the upper left hand corner.
- ☐ The horizontal size.
- ☐ The vertical size.

Now let's assign these values to a subroutine that will draw a simple rectangle:

```
1000 COLOR COLR:PLOT X,Y:
DRAWTO X+XSIZE,Y:DRAWTO X+XSIZE,
Y+YSIZE:DRAWTO X,Y+YSIZE:DRAWTO X,
Y:RETURN
```

Go ahead and type this subroutine list into your computer. Notice that the numbers we have to designate are COLR,X,Y,XSIZE and YSIZE. Let's try it out. Now type:

```
10 COLR=1
20 X=70:Y=38
30 XSIZE=20:YSIZE=20
```

This sets the values we needed to specify. Before we try out our rectangle subroutine, we need to make sure that we're in the proper graphics mode, so we type:

```
5 GRAPHICS 7+16
```

Continued Page 21.





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This line simply tells the computer we want a full screen in Graphics Mode 7. Now we're ready to begin. Type:

```
40 GOSUB 1000
50 STOP
```

Okay, now type RUN, and watch what happens. Whoops, it worked okay, but didn't stay on the screen for long did it? So let's change line 50. Type:

```
5 GRAPHICS 7+16
10 COLR=1
20 X=70:Y=38
30 XSIZE=20:YSIZE=20
40 GOSUB 1000
50 GOTO 50
1000 COLOR COLR:PLOT X,Y:
DRAWTO X+XSIZE,Y:DRAWTO X+XSIZE,
Y+YSIZE:DRAWTO X,Y+YSIZE:DRAWTO X,
Y:RETURN
```

Now type RUN. To stop the program, we have to press the BREAK key. So now we have a subroutine that works, even if it's not very exciting. So let's spiff it up a bit. We'll change lines 30, 40, and 50.

```
30 XSIZE=XSIZE+1:YSIZE=YSIZE+1
40 GOSUB 1000
50 GOTO 30
```

Now type RUN. What happened? Well things were going great until YSIZE = 58. At that point the computer interpreted $Y + YSIZE = 96$ as an illegal value in Graphics Mode 7 + 16. So **WARNING:** this subroutine does not check for errors. Before using the subroutine at 1000, we have to be sure that $X + XSIZE$ is less than 160 and

$Y + YSIZE$ is less than 96. In this program we can correct this problem by adding lines 35 and 60.

```
5 GRAPHICS 7+16
10 COLR=1
20 X=70:Y=38
30 XSIZE=XSIZE+1:YSIZE=YSIZE+1
35 IF (Y+YSIZE=96) THEN 60
40 GOSUB 1000
50 GOTO 30
60 GOTO 60
1000 COLOR COLR:PLOT X,Y:
DRAWTO X+XSIZE,Y:DRAWTO X+XSIZE,
Y+YSIZE:DRAWTO X,Y+YSIZE:DRAWTO X,
Y:RETURN
```

Now it runs okay. So let's try changing the X and Y position values. Type:

```
20 X=X+3:Y=Y+2
30 XSIZE=20:YSIZE=20
50 GOTO 20
```

This creates an interesting pattern. An even more interesting pattern results if we type:

```
5 GRAPHICS 7+16
10 COLR=1
15 FOR I=0 TO 94 STEP 2
20 X=I:Y=I
30 XSIZE=159-2*X:YSIZE=95-2*Y
35 IF (Y+YSIZE=96) THEN 60
40 GOSUB 1000
50 NEXT I
60 GOTO 60
1000 COLOR COLR:PLOT X,Y:
DRAWTO X+XSIZE,Y:DRAWTO X+XSIZE,
Y+YSIZE:DRAWTO X,Y+YSIZE:DRAWTO X,
Y:RETURN
```

And, of course, type RUN. We're about ready to try some interesting art. Do you know about the RND function? It generates a random number between 0 and 1. So to generate a number between 0 and 10, we could use a statement like $X = \text{RND}(1) * 10$. So now change lines 15 and 20.

```
5 GRAPHICS 7+16
10 COLR=1
15 X=RND(1)*159
20 Y=RND(1)*95
30 XSIZE=RND(1)*(159-X)
35 YSIZE=RND(1)*(95-Y)
40 GOSUB 1000
50 GOTO 15
60 GOTO 60
1000 COLOR COLR:PLOT X,Y:
DRAWTO X+XSIZE,Y:DRAWTO X+XSIZE,
Y+YSIZE:DRAWTO X,Y+YSIZE:DRAWTO X,
Y:RETURN
```

See what happens when you run the program now. Not bad, huh? One more step and we're through for the day. Type:

```
10 SETCOLOR RND(1)*4,RND(1)*15,
RND(1)*15:COLR=RND(1)*4
50 GOTO 10
```

There you have it, a piece of modern abstract art. You're on your own now. Try changing the program, experiment a little. Who knows, you might end up designing your own high-tech computer art!

Jim Dunion is a staff member of the Atari Corporate Research and Development Division.

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(see Page 28!)

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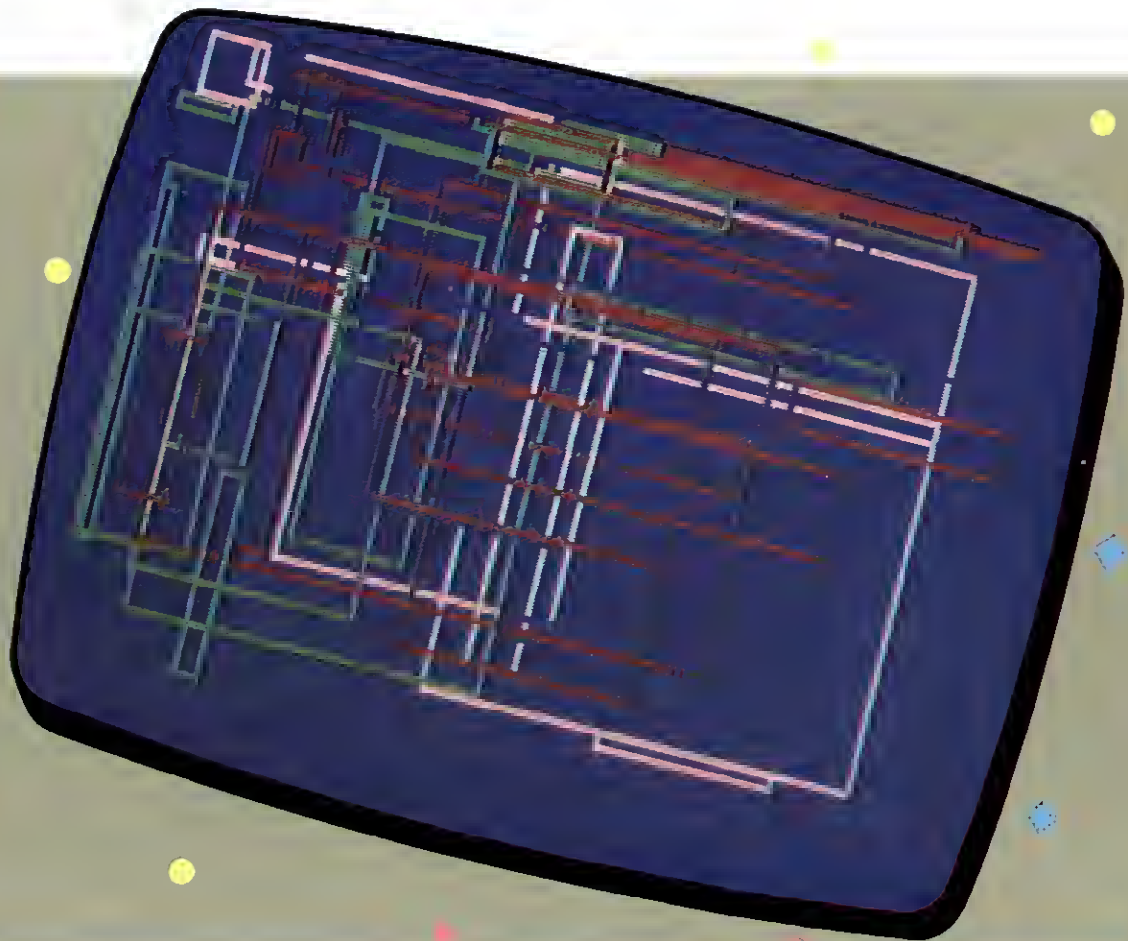
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5 GRAPHICS 7+16

Set Graphics Mode

```
10 SETCOLOR RND(1)*4,RND(1)*15,  
RND(1)*15:COLR=RND(1)*4
```

This statement produces a SETCOLOR instruction that picks a random color register between 0-4, sets it to a random color value 0-15, and selects a random intensity 0-15. The COLOR generated is a random value 0-4.

```
15 X=RND(1)*159
```

This picks an X value between 0-159.

```
20 Y=RND(1)*95
```

Set Y to a random value 0-95.

```
30 XSIZE=RND(1)*(159-X)
```

This command ensures the horizontal line will be on the screen.

```
35 YSIZE=RND(1)*(95-Y)
```

Set a YSIZE randomly between 0 and 95. This command ensures the vertical lines drawn will be on the screen.

```
40 GOSUB 1000
```

Draw the rectangle.

```
50 GOTO 10
```

Go back and do it again

```
60 GOTO 60
```

In final program, this line does nothing.

```
1000 COLOR COLR:PLOT X,Y:  
DRAWTO X+XSIZE,Y:DRAWTO X+XSIZE,  
Y+YSIZE:DRAWTO X,Y+YSIZE:DRAWTO X,Y:RETURN
```

This is the Draw Rectangle routine. It sets the draw color, plots the upper left hand corner, draws the top line, draws the right hand edge, draws the bottom line, draws the left hand edge and returns.

KIDBITS LETTERS

In the Fall issue of THE ATARI CONNECTION, we asked you younger readers to send us a story about yourself and a program to share with other young ATARI Home Computer users. We also said we'd send you a free T-shirt if we published your letter and program.

The following letters were sent to us by Sean Heittman and Philip Morgan, who both earned well-deserved T-shirts! We thank you for sharing your programming efforts with us.

My name is Sean Heittman. I am 11 years old. I am in the sixth grade.

My hobby is, obviously enough, programming. My computer is an ATARI 800. I use the computer (Clyde, as I call him) to help me devise my own programs for school-work and for creating my own games.

I hit on this program which draws different color lines from four points on the screen, and beeps out sounds as it goes. The program may be stopped at a particular point without destroying the display by simply typing "S" (for stop). To pick up where you left off, type "C" (for continue).

The colors may be changed by changing the SETCOLOR statements in line 30. The four points may be altered by changing variables: CX, CY, DX, DY, EX, EY, FX, FY. In these (letter) X is the x axis, and (letter) Y is the y axis. I have found this program to be relaxing and my mother loves it.

An ATARI fan and programmer

Sean Heittman
Alexandria, Virginia

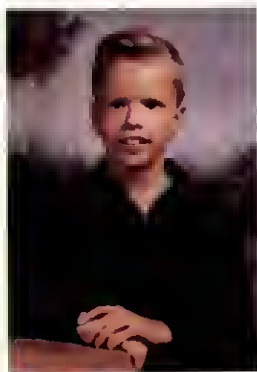
My name is Philip Morgan, Jr. I am 12 years old and in the 7th grade. I enjoy programming very much and hope to get a job as a programmer when I grow older. I think Atari makes one of the best computers made. I hope you enjoy my program.

Sincerely yours,
Philip Morgan Jr.
Mahopac, New York



Pandora's Box by Philip Morgan

```
10 A=2:B=1
20 GRAPHICS 7
30 COLOR A
40 PLOT 90,50:DRAWTO 110,35:DRAWTO 90,35
50 POSITION 70,50:POKE 765,A
60 XID 18,46,0,0,"S"
70 PLOT 90,60:DRAWTO 90,50:DRAWTO 70,50
80 POSITION 70,60:POKE 765,B
90 XID 18,46,0,0,"S"
100 PLOT 91,60:DRAWTO 110,46:DRAWTO 110,35
110 COLOR A:PLOT 90+A,54:DRAWTO 108+A,40
120 A=A+1:IF A=4 THEN A=1
130 B=B+1:IF B=4 THEN B=1
140 GOTO 30
```



Modern Art by Sean Heittman

```
10 GRAPHICS 7+16
20 CX=80:CY=42:OX=30:OY=20:EX=130:EY=65:FY=70:FX=90
30 SETCOLOR 0,4,4:SETCOLOR 1,6,5:SETCOLOR 2,13,4:SETCOLOR 4,2,1
40 FOR GX=1 TO 3:X=INT(159*RND(0)):Y=INT(95*RND(0))
50 COLOR 1:PLOT CX,CY:DRAWTO X,Y:NEXT CX
60 X=INT(159*RND(0)):Y=INT(95*RND(0))
70 COLOR 2:PLOT OX,OY:DRAWTO X,Y:SOUND 0,X,10,1
80 X=INT(159*RND(0)):Y=INT(95*RND(0))
90 COLOR 3:PLOT EX,EY:DRAWTO X,Y:SOUND 0,X,10,1
100 X=INT(159*RND(0)):Y=INT(95*RND(0))
110 COLOR 2:PLOT FX,FY:DRAWTO X,Y:SOUND 0,X,10,1
120 IF PEEK(764)=62 THEN GOTO 40
130 GOTO 20
140 SOUND 0,0,0,0:IF PEEK(764)=18 THEN GOTO 20
150 GOTO 40
```

KIDBITS

FIND THE BUG WINNER

Last issue we published our first "Find The Bug" game contest. Needless to say, your response was sensational and well appreciated here at THE ATARI CONNECTION. Every one of your letters was read and out of over seventy entries only a few failed to "Find The Bug". Don't laugh. Even our failures came close, but "no cigar". We tossed all your letters into an empty trash can and held an official "Find The Bug" drawing, and we're pleased to announce the winner is: Mark A. Keat. Our exhalted "Bug Finder" Mark, cleverly unveils the "Find The Bug" solution and gives a brief personal account of himself as follows:

Dear Atari:

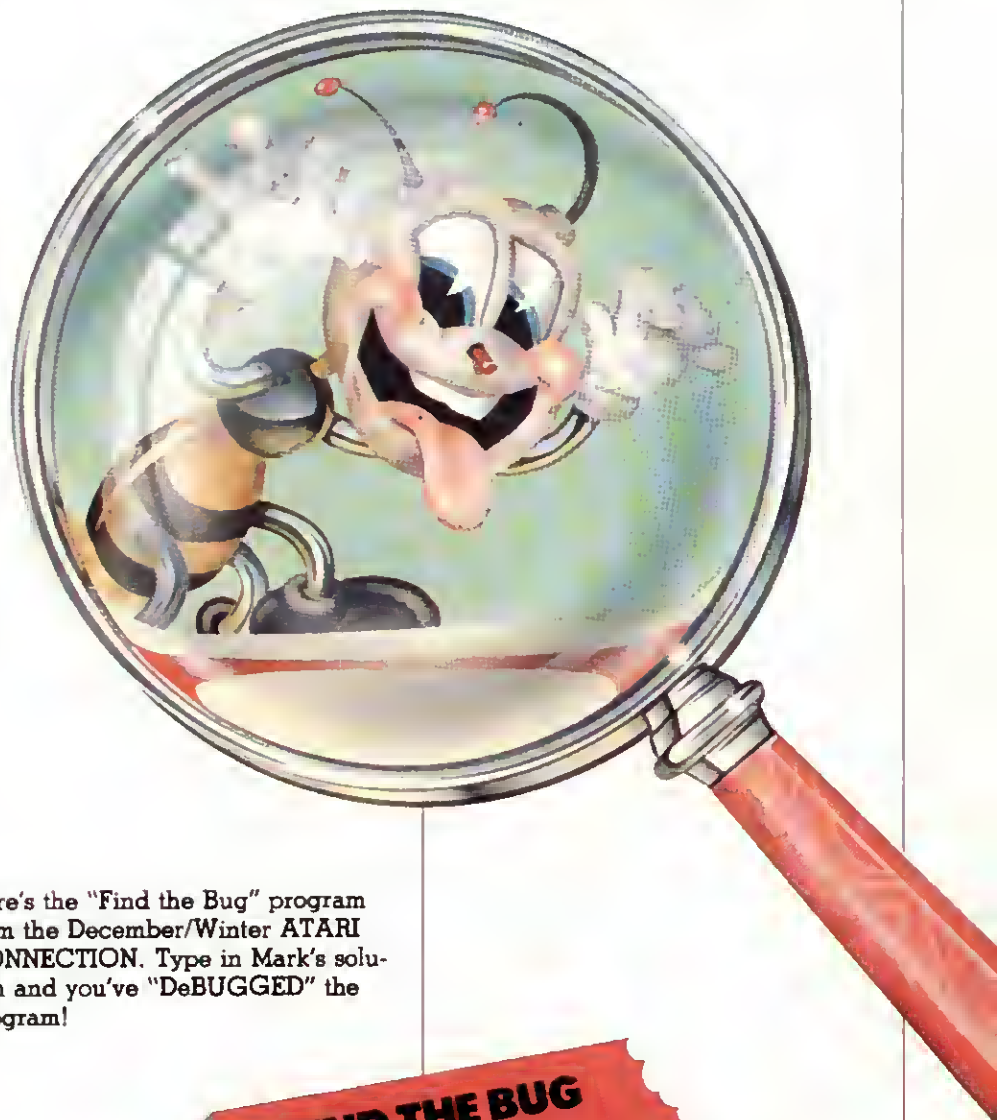
I found the bug in the program on Page 14. The error was ERROR-141 Cursor Out of Range. I corrected the Bug by changing the following lines:

```
30 Y=RND(0)*149
40 X=RND(0)*309
```

I am ten years old, and I am in the fifth grade. I enjoy playing games on our ATARI 800. I have Basketball, Asteroids, Chess, Star Raiders, Space Invaders, and Missile Command. I enjoy typing in small programs from the Atari Connection. I am just starting to learn to program in BASIC. If I win the contest, I would like to have a game that I don't already have.

Yours truly,
Mark A. Keat
Huntsville, Alabama

We'll honor Mark's request since he already owns the "Find the Bug" prize of an ATARI Asteroids game cartridge. Instead, we've sent him a CAVERNS OF MARS game diskette from the Atari Program Exchange!



Here's the "Find the Bug" program from the December/Winter ATARI CONNECTION. Type in Mark's solution and you've "DeBUGGED" the program!

FIND THE BUG

```
10 GRAPHICS 8
20 SETCOLOR 2,0,0:COLOR 3
30 Y=RND(0)*192
40 X=RND(0)*320
50 SOUND 0,Y,10,10
60 PLOT X,Y
70 DRAWTO X+2,Y:DRAWTO X+2,Y+2
80 DRAWTO X,Y+2:DRAWTO X,Y
90 FOR DE=5 TO 50:NEXT DE
100 GOTO 30
```


PROGRAM PUZZLE

By Tom Hudson

The Program Puzzle contains two different programs but the lines have been mixed up. You must unscramble the lines and make each program work. That doesn't sound too tricky. Here is the hard part: the two programs must be combined to form a larger, working program.

Program Written in ATARI BASIC.

```

10 X=INT(255*RND(1))
20 FOR M=1 TO 16
30 DIM A$(10)
40 SETCOLOR 2,4,M
50 PRINT "WHAT IS YOUR NAME";
60 INPUT A$
70 GRAPHICS 2+16
80 SOUND 1,X,10,10
90 FOR R=1 TO 20
100 A=INT(20*RND(1))
120 NEXT R
130 B=INT(10*RND(1))
140 POSITION A,B
150 PRINT #6;A$
160 GOTO 40
170 GOTO 10

```

JOHN MATTOS

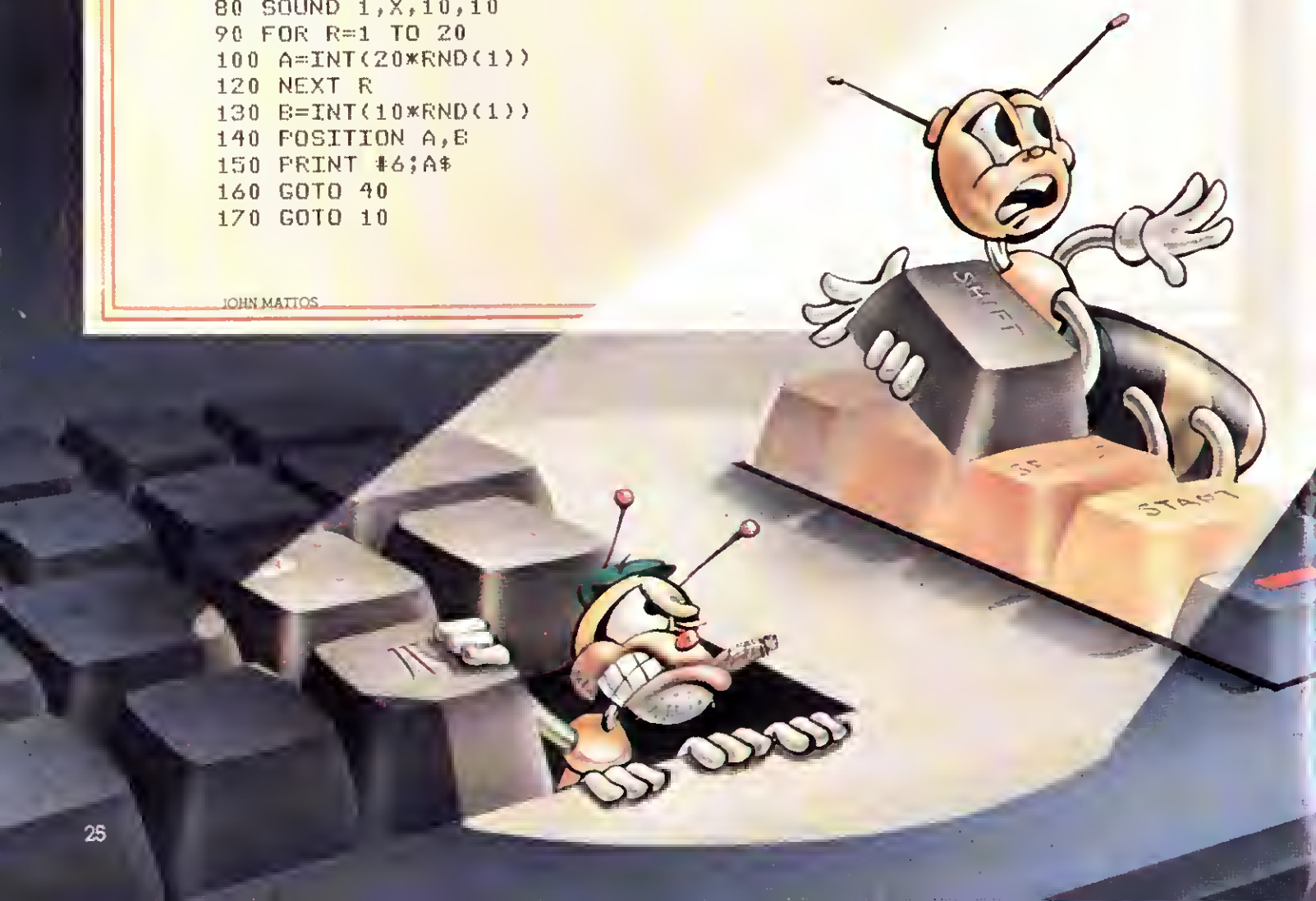
Program Number A will spell your name out all over the screen, erase the names, and then print them out over and over again.

Program Number B will make random musical sounds and change the color of the screen.

The combined program of *Program A* and *Program B* will write your name all over the screen to the rhythm of fast paced computer music.

Solution on Page 27.

Tom Hudson is a Sales Training Specialist with the Atari Home Computer Division.



FIND THE BUG

By Tom Hudson

This issue, we have two "Bugs". A *Mean Bug* and *Nice Bug*. Both Bug Programs are written in ATARI BASIC. The Nice Bug we think you can figure out. But the Mean Bug is tough!

The Nice Bug

The *Nice Bug* isn't really that nice. After all, it's still a "Bug". Type the Nice Bug program into your computer and RUN it. Now see if you can figure out what went wrong!

The Mean Bug

You may be able to spot the *Mean Bug* if you're good. You may be able to fix it, if you're a really good programmer. You may even be able to figure out why the Mean Bug is doing what it does, but you have to be really good to do that. For the FIND THE BUG contest, we want you to not only find the Mean Bug and correct the mistake, but tell us *WHAT* the bug is doing and *WHY* it does it.

THE NICE BUG

```
10 DIM A$(15)
20 PRINT "PLEASE TYPE YOUR NAME";
30 INPUT A$
40 SETCOLOR 0,0,0
50 POSITION 5,5:PRINT #6;A$
60 GRAPHICS 3+16
70 FOR X=1 TO 10
80 FOR Z=0 TO 16
90 SETCOLOR 0,4,Z
100 NEXT Z
110 NEXT X
120 SETCOLOR 0,0,0
130 GOTO 40
```

MEAN BUG WARNING:

We suggest that you type in the program and SAVE it before trying to do anything else. If you can't figure out the problem within three minutes, turn your computer off and start over again. IT'S NOT BROKEN. *The Mean Bug cannot damage your computer!* The "Bug" is in the program, not your computer. GOOD LUCK!

THE MEAN BUG

```
10 FOR X=1 TO 255 STEP 5
20 GRAPHICS 5+16:COLOR 3
30 PLOT 44,45:DRAWTO 49,15
40 COLOR 0:DRAWTO 20,15
50 DRAWTO 25,45:POSITION 25,25
60 POSITION 25,45
70 POKE 765,1:POKE 145,X
80 XIO 18,#6,0,0,"S:"
90 NEXT X
100 GOTO 100
```

FIND THE BUG CONTEST!

If you find the *Nice Bug*, write down the ERROR number/message along with a short story about yourself. If you correctly "Find the Bug," your entry will qualify you for a Special "Find the Bug" Prize Drawing for an ATARI Caverns of Mars game diskette! If you're a winner, we'll print your story in THE ATARI CONNECTION.

If you also find the *Mean Bug*, include your solution with your "Find the Bug" entry, and if you're a winner, you'll receive a Bonus Prize of Eastern Front '41, compliments of the Atari Program Exchange.

SEND YOUR ENTRY TO:
FIND THE BUG
c/o THE ATARI CONNECTION
60 Plumeria C
P.O. Box 427
Sunnyvale, CA 94086

BOOK REVIEW

COMPUTE!'S FIRST BOOK OF ATARI COMPUTE! BOOKS

COMPUTE! Magazine's special section, *Atari Gazette*, features informative and well written articles on the ATARI Computer. Since the first *Atari Gazette* appeared in the fall of 1979, not long after the ATARI 400 and ATARI 800 Computers were first introduced, the column has expanded to over forty pages each month—a testimony to the growing popularity of ATARI Home Computers!

COMPUTE!'s First Book of Atari collected the best articles written about the ATARI Computer during 1980 and packaged the material in a handbook format that serves as an easy to read reference guide for anyone who may want to learn more about the inner secrets of their ATARI Home Computer.

The book also features two programmers well known for their expertise in programming ATARI Computers: Chris Crawford and Dave Thornberg.

Chris Crawford's article illustrates how ATARI Computer Player/Missile Graphics works as an easy to use graphic animation system. The article is illustrated with a working model program and charts of memory locations for the player/missiles. Chris' humorous imagination and programming expertise ranks him as one of the more popular and creative programmers for Atari, Inc.

Dave Thornberg, well known for his imaginative ATARI Computer graphic programs, contributes an article and

program listing that illustrates how to create three dimensional graphics by using different shades of the same basic color.

Six chapters help group the book's material into general categories for easy reference. Sample chapter topics include:

**Beyond the Basics* takes you into some of the more sophisticated regions of microcomputer programming. *Why Machine Language* by Jim Butterfield explains the differences between programming in BASIC and machine language and how the two languages compliment each other.

**Graphics* is by far the most entertaining chapter with its articles by Chris Crawford and Dave Thornberg. *Color Wheel for Atari* by Neil Harris creates a computer color light show with an amazingly simple fifteen-line program that displays the entire ATARI Computer color spectrum.

**Applications* features an article by Al Baker, *Atari Tape Data Files*, which shows how to write a program that automatically saves new data.

**Peripheral Information* contains a welcome explanation of how to use the ATARI 810 Disk Operating System (DOS).

COMPUTE!'S First Book of Atari succeeds as a collection of articles and programs for understanding and getting more out of your ATARI Computer. There's something for everyone—from novices to programmers proficient in Assembly and machine languages.

For more information write:

COMPUTE! BOOKS
c/o THE ATARI CONNECTION

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Answers to KIDBITS Program Puzzle Page 25

Program Puzzle Listing

```
10 X=INT(255*RND(1))
20 FOR M=1 TO 16
30 DIM A$(10)
40 SETCOLOR 2,4,M
50 PRINT "WHAT IS YOUR NAME";
60 INPUT A$
70 GRAPHICS 2+16
80 SOUND 1,X,10,10
90 FOR R=1 TO 20
100 A=INT(20*RND(1))
120 NEXT R
130 B=INT(10*RND(1))
140 POSITION A,B
150 PRINT $A;A$
160 GOTO 40
170 GOTO 10
```

Puzzle A

```
10 DIM A$(10)
20 PRINT "WHAT IS YOUR NAME";
30 INPUT A$
40 GRAPHICS 2+16
50 FOR R=1 TO 20
60 A=INT(20*RND(1))
70 B=INT(10*RND(1))
80 POSITION A,B
90 PRINT $A;A$
100 NEXT R
110 GOTO 40
```

Puzzle B

```
10 X=INT(255*RND(1))
20 FOR M=1 TO 16
30 SETCOLOR 2,4,M
40 SOUND 1,X,10,10
50 NEXT M
60 GOTO 10
```

Solution

```
10 DIM A$(10)
20 PRINT "WHAT IS YOUR NAME";
30 INPUT A$
40 GRAPHICS 2+16
50 FOR R=1 TO 20
60 A=INT(20*RND(1))
70 B=INT(10*RND(1))
80 POSITION A,B
90 PRINT $A;A$
100 X=INT(255*RND(1))
110 FOR M=1 TO 16
120 SETCOLOR 2,4,M
130 SOUND 1,X,10,10
140 NEXT M
150 NEXT R
160 GOTO 40
```

Next Issue

An interview with Don Kurtz, the Director of Marketing Services with the Atari Home Computer Division.

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To order see Page 22.

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